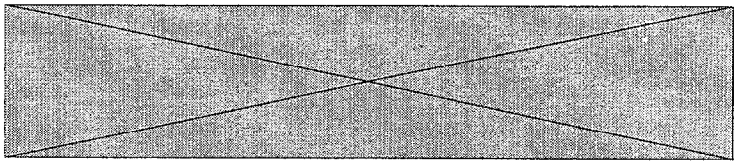

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Date:

Mr. Richard N. Stryker
Atlantic Division, Naval Facilities Engineering Command
Environmental Quality Division
Code: 1822
Building N 26, Room 54
1510 Gilbert Street
Norfolk, Va 23511-2699

Re: Naval Weapons Station, Yorktown, Va.
Sites 1 & 3
Review of the revised ecological risk assessment

Dear Mr. Stryker:

The U.S. Environmental Protection Agency (EPA) has reviewed the Navy's revised draft ecological risk assessment for Sites 1 and 3 located at the Naval Weapons Station Yorktown (WPNSTA). Based upon that review, we offer the following comments and concerns:

1. The Draft Ecological Risk Assessment presents a Phase Two ecological risk assessment for Sites 1 and 3. Site 1 is a 6-acre area, just north of the headwaters of Indian Field Creek. The landfill was used from 1965 to 1979 for general disposal. Materials reportedly disposed of in this landfill include plastic lens grinding waste and sand mining wastes, containing asbestos, oil, grease, paint, solvents, household appliances, scrap metal banding, construction debris, electrical wires, waste oil, and nitramine-contaminated carbon. The landfill is currently covered by two feet of soil.

2. Site 3 is a 2-acre area, located behind the Group 16 Magazines, along the headwaters of Indian Field Creek. The landfill operated between 1940 and 1970, and was used primarily for sand mining. Wastes disposed of in this landfill include solvents, sludge from boiler cleaning operations, grease trap wastes, Imhoff tank skimmings containing oil and grease, and animal carcasses. Most of the site is now covered with two feet of soil, and is overgrown with trees. For the ecological risk assessment, Site 3 was divided into two locations: 1) Site 3 - Proper, and 2) Site 3 - Area of Concern.

3. It was indicated on page 7-1 that data used in the ecological risk assessment were collected

during the Round Two Remedial Investigation (RI). Surface soil samples were collected in September 1995, and confirmatory soil samples were collected in July 1996 in the suspected hot spot area, presumably at Site 3 - Area of Concern. It was also indicated that the confirmatory samples were only analyzed for semivolatile organic compounds (SVOCs). Table 7-4 compares the frequency and range of surface soil data to surface soil screening levels at Site 3. It appears that six surface soil samples were collected and analyzed for SVOCs, and one surface soil sample was analyzed for inorganics. These results are contrary to the information on page 7-1 indicating that samples were only analyzed for SVOCs. One soil sample is inadequate to characterize ecological risk to inorganics. If additional samples were collected during the Round One RI, then analytical results for inorganics should be combined with those in Table 7-4, and used to estimate ecological risk. Otherwise, EPA recommends collecting additional soil samples from Site 3 - Area of Concern for metals analysis. Analytical results would then be used in a more thorough ecological risk assessment.

4. It is unclear whether sediment samples were analyzed for SVOCs. If sediment samples were analyzed for SVOCs, and yielded non-detects, then this information should be included somewhere in the document. Given the proximity of Site 3 - Area of Concern to Indian Field Creek, it is reasonable to assume that SVOCs may be present in creek sediments.

5. Based on the information presented in the document, the EPA supports a no further action scenario for soils at Site 1 and Site 3 - Proper, due to low levels of contamination, and minimal risk to ecological receptors. The EPA recommends collecting additional samples at Site 3 - Area of Concern to determine the areal extent of SVOC contamination, and to develop removal criteria for SVOC contamination. Documentation should be provided to exclude inorganics as ecological contaminants of concern in soils at Site 3 - Area of Concern, or additional soil sampling is needed to characterize the nature and extent of inorganic contamination at this site. Results from the ecological risk assessment indicate that some inorganics (iron, manganese, aluminum, chromium and lead) in Indian Field Creek sediments pose a risk to aquatic receptors. Of these inorganics, the EPA is primarily concerned with iron and chromium. The EPA recommends either conducting additional sediment sampling and/or toxicity testing to further characterize the nature and extent of contamination, or developing remedial alternatives for contaminated sediments that include a long-term monitoring plan for creek sediments.

Editorial Comments

1. On page 7-2, the first paragraph, fourth sentence, should read, Athe pond is a depression composed of impervious material that retains surface water during storm events.@

2. Section 7.2 presented the assumptions used in the ecological risk assessment. The EPA recommends combining the first two bullets into a single bullet. The first bullet, as is, does not constitute an assumption.

3. On page 7-15, the second paragraph, last sentence in Section 7.6.4 should read, Adepending on the ECOC, a BSAF may err on the conservative or not so conservative end of the spectrum.@

This concludes EPA's review comments concerning the revised draft ecological risk assessment for Sites 1 & 3 located at the WPNSTA. If you have any questions regarding the above, please feel free to call me at (215) 566-3357,

Sincerely,

Robert Thomson, PE
Superfund Federal Facilities (3HW50)

cc: Steve Mihalko (VDEQ, Richmond)
Jeff Harlow (WPNSTA, 09E)
Barbara Okorn (USEPA, 3HW41)